(b) a first sequence called the "loop sequence" that is complementary to a target nucleic acid sequence;

(c) a second sequence and a third sequence, which are located on opposite ends of the loop sequence which hybridize to each other in the absence of the target nucleic acid sequence to form a "stem structure," wherein said stem structure contains a restriction enzyme cleavage site that is not present when the loop sequence (b) is hybridized to the target nucleic acid sequence; and

(d) a label attached to the other terminal end of the oligonucleotide wherein cleavage by a restriction enzyme specific for the restriction site of the stem sequences detaches the label from the surface;

and wherein hybridization of a fully complementary target nucleic acid to the loop sequence breaks the intramolecular hybridization bonds of the stem structure and removes the restriction site.

8. (Amended) The nucleic acid probe of claim 1, wherein the label is biotin and is attached to the oligonucleotide through a biotin-steptavidin coupling.